

taboos in achieving the most cost effective designs. However, it is not likely that future receivers would be inherently designed to eliminate taboo requirements, unless new technology makes new circuit and component design compromises more cost effective, or an FCC mandated receiver performance standard were to be established. Nevertheless, new receiver design approaches and technical innovations are continually being evaluated.

- d. What are the anticipated costs of taboo immune TV receivers and the time frame for significant market penetration?

The Advanced Receiver Study by Texas Instruments and RF Monolithics described a tremendous cost increase (\$20 to \$40, without adjustment for inflation) for a taboo-immune receiver. Such a cost increase is not tenable, when considering that small screen TV sets presently sell to consumers at prices under \$150, and that the direct cost of the unit must be significantly less than the selling price to cover dealer's margin and the manufacturer's margin (includes the cost of engineering, facilities, etc.). Intermediate designs offering "taboo-reduced" performance (rather than "taboo-immune" performance) may be producible at a cost that is less than the \$20 to \$40 range, depending on how many taboos are changed.

Significant market penetration would exist 10 years after the

widespread market availability of taboo-reduced TV tuners. It would be more difficult to predict a taboo-reduced TV tuner introduction date, because the first development cycle (a few years) could be reached only after identifying the compelling reasons and specific guidelines for incorporating such tuners in TV receivers.

21. Should the Commission take action now to encourage reduced generation of and susceptibility to taboos, either on channels used for NTSC or auxiliary advanced TV signals? If so, what action is appropriate, e.g., spectrum allocation, interference criteria, or other?

GE CEB agrees that there is an opportunity to improve TV spectrum allocations. New ATV systems will almost certainly be designed to take advantage of interference reducing modulation techniques. Since ATV will be different from NTSC, the NTSC taboos would likely not be appropriate for ATV systems.

It is highly likely that additional information from ATV signals can be incorporated in the UHF spectrum without adversely affecting the present channel allocation plan. However, based upon the issues defined in these comments, a comprehensive study of interference criteria and all other factors would be needed before any taboos could be modified.

To summarize, GE CEB respectfully suggests that a modification of the present UHF taboos and the implementation of any proposed ATV System requires the development of full and comprehensive information covering the following issues:

1. The definition of the most appropriate ATV System and an implementation timetable.
2. A plan for the future use of ATV spectrum assignments that optimizes the use of ATV, existing services, and other foreseeable future uses.
3. The impact of *1 and *2 on the current receiver population.
4. The development of requirements for improved television receiver designs that would alleviate the problems created for existing TV products, as defined in *3.
5. Establishing of a liberal grandfathering timetable that protects existing TV receivers from performance problems caused by the imposition of UHF taboo modifications and ATV spectrum allocations.

CONCLUSIONS

Several significant factors included within the scope of this proceeding have been presented and important issues have been addressed by GE CEB for Commission consideration.

Research into consumer wants, needs and desires sets out a very revealing story. The consumer has told the television industry that improved TV performance would be desirable. This translates to bigger and better pictures with higher resolution and free of the present system artifacts. The consumer wants improved audio reproduction capability, and additional television receiver based services designed to provide increased convenience in his life and functionality in his equipment.

However, the consumer is not willing to pay an unreasonably high price: he must continue to be able to have uninterrupted utilization of his current equipment until he can afford the new services; he wants standardization of new systems so his new TV purchase would incorporate all of the available system advancements, including improved services as well as existing broadcasts; and he wants to be assured that his new investment will not be obsoleted almost immediately as further system improvements are developed.

It is now up to the Commission and the television industry to accept this challenge and develop an ATV system behind which it can marshal all of its resources, while focussing on providing the consumer with an improved television system. The system must be one that satisfies the consumers' desires for the future and brings the television experience to the pinnacle of a new video era, by means of the least disruptive and most economical path. Addressing these

consumer needs and all identified public interest concerns about the future of advanced television broadcasting in the U.S. is a challenge met by the DSRC ACTV system approach, and GE CEG strongly endorses its concept and the practical DSRC plan for the future of ATV.

GE CEB respectfully urges that the Commission recognize the concerns expressed herein, and proceed with appropriate caution before accepting any ATV plans that could disrupt the current status of the Nation's valued Television Broadcast Service.

Respectfully submitted,

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